

WHAT IS CLAIMED IS:

1. An information recording medium comprising a lead-in area and a data area for storing contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the first lead-in information area corresponding to a first playback mode, the second lead-in information area corresponding to a second playback mode different from the first playback mode, the first lead-in information area having a first depth and being for storing lead-in information related to the contents information stored in the data area, the second lead-in information area including pre-pits having a second depth greater than the first depth, the pre-pits representing predetermined information related to the contents information stored in the data area.
2. An information recording medium comprising a lead-in area and a data area for storing contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the first lead-in information area corresponding to a first recording/playback mode, the second lead-in information area corresponding to a second recording/playback mode different from the first recording/playback mode, the first lead-in information area being for storing lead-in information related to the contents information stored in the data area in units of predetermined error correction blocks, the second lead-in

- information area being for inerasably storing information containing predetermined information related to the contents information stored in the data area, wherein an amount of the information containing the predetermined information exceeds a value
- 5 corresponding to an upper limit of an ability of the predetermined error correction blocks to correct errors.
3. An information recording medium as recited in claim 1, wherein the lead-in information contains flag information
- 10 representing a validity of the lead-in information.
4. An information recording medium as recited in claim 1, wherein the first lead-in information area and the second lead-in information area comprise information-recordable areas made of phase-changeable material, and the predetermined information is
- 15 reproducible.
5. A method of recording lead-in information and contents information on an information recording medium, the information recording medium comprising a lead-in area and a data area for storing contents information, the lead-in area including a first lead-in information area for storing the lead-in information and a second lead-in information area for storing the lead-in information except predetermined information related to the contents information
- 20 stored in the data area, the method comprising the steps of:
- 25 recording the lead-in information on the first lead-in

- information area, and recording the contents information on the data area during a first recording mode of operation which corresponds to recording on the first lead-in information area; and recording the lead-in information except the predetermined
- 5 information on the second lead-in information area, and recording the contents information on the data area during a second recording mode of operation which corresponds to recording on the second lead-in information area.
- 10 6. An apparatus for recording lead-in information and contents information on an information recording medium, the information recording medium comprising a lead-in area and a data area for storing contents information, the lead-in area including a first lead-in information area for storing the lead-in information and a second lead-in information area for storing the lead-in information except predetermined information related to the contents information stored in the data area, the apparatus comprising:
- 15 first means for deciding which of a first recording mode of operation and a second recording mode of operation is selected,
- 20 wherein the first recording mode of operation corresponds to recording on the first lead-in information area, and the second recording mode of operation corresponds to recording on the second lead-in information area;
- 25 second means for recording the lead-in information on the first lead-in information area, and recording the contents information on the data area when the first means decides that the

first recording mode of operation is selected; and

third means for recording the lead-in information except the predetermined information on the second lead-in information area, and recording the contents information on the data area when the
5 first means decides that the second recording mode of operation is selected.

7. A method of reproducing contents information from an information recording medium, the information recording medium
10 comprising a lead-in area and a data area for storing the contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the method comprising the steps of:

reproducing lead-in information from the first lead-in
15 information area during a first playback mode of operation which corresponds to the first lead-in information area;

reproducing lead-in information from the second lead-in information area during a second playback mode of operation which corresponds to the second lead-in information area; and

20 reproducing the contents information from the data area in cases where the lead-in information is reproduced from one of the first lead-in information area and the second lead-in information area.

25 8. An apparatus for reproducing contents information from an information recording medium, the information recording medium

comprising a lead-in area and a data area for storing the contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the apparatus comprising:

- 5 first means for scanning the first lead-in information area to reproduce lead-in information from the first lead-in information area during a first playback mode of operation which corresponds to the first lead-in information area;
- second means for scanning the second lead-in information area to reproduce lead-in information from the second lead-in information area during a second playback mode of operation which corresponds to the second lead-in information area; and
- third means for reproducing the contents information from the data area in cases where one of the first means and the second means reproduces the lead-in information from one of the first lead-in information area and the second lead-in information area during one of the first playback mode of operation and the second playback mode of operation.
- 20 9. An information recording medium as recited in claim 1, wherein the first depth is smaller than $\lambda/(8n)$, and the second depth is in a range of about $\lambda/(4n)$ to about $\lambda/(8n)$, where " λ " denotes a wavelength of reading laser light and "n" denotes a refractive index of a material for the medium.
- 25 10. An information recording medium as recited in claim 2,

- wherein an information amount of the predetermined error correction blocks is equal to about 32 Kbytes, and the upper limit of an ability of the predetermined error correction blocks to correct errors corresponds to about 2 Kbytes, and wherein the amount of
- 5 the information containing the predetermined information is equal to about 8 Kbytes or more.
11. An information recording medium comprising a lead-in area and a data area for storing contents information, the lead-in area
- 10 including a first lead-in information area and a second lead-in information area, the first lead-in information area having a first depth and being for storing first lead-in information related to the contents information stored in the data area, the first lead-in information including ~~information of medium manufacture and~~
- 15 information of a contents-information start position, the second lead-in information area including pre-pits having a second depth greater than the first depth, the pre-pits representing predetermined information related to the contents information stored in the data area, the second lead-in information area
- 20 including an area for storing second lead-in information including the ~~information of medium manufacture and~~ the information of the contents-information start position.
12. An information recording medium comprising a lead-in area
- 25 and a data area for storing contents information, the lead-in area including a first lead-in information area and a second lead-in

- information area, the first lead-in information area being for storing
first lead-in information related to the contents information stored
in the data area in units of predetermined error correction blocks,
the first lead-in information including information of medium
5 manufacture and information of a contents-information start
position, the second lead-in information area being for inerasably
storing information containing predetermined information related
to the contents information stored in the data area, wherein an
amount of the information containing the predetermined
10 information exceeds a value corresponding to an upper limit of an
ability of the predetermined error correction blocks to correct
errors, the second lead-in information area including an area for
storing second lead-in information including the information of
medium manufacture and the information of the contents-
15 information start position.
13. An information recording medium as recited in claim 11,
wherein each of the first lead-in information and the second lead-in
information contains flag information representing a validity of the
20 related lead-in information.
14. An information recording medium as recited in claim 11,
wherein the first lead-in information area and the second lead-in
information area comprise information-recordable areas made of
25 phase-changeable material, and the predetermined information is
reproducible but becomes unreadable when new information is

recorded again.

15. An information recording medium as recited in claim 1, wherein the first lead-in information area corresponds to RTR standards, and the second lead-in information area corresponds to DVD-Video standards.
16. An information recording medium as recited in claim 1, wherein the predetermined information comprises information of a CSS key having a given value.
17. A method of reproducing contents information from an information recording medium, the information recording medium comprising a lead-in area and a data area for storing the contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the method comprising the steps of:
 - reading out first lead-in information from the first lead-in information area;
 - deciding whether or not the read-out first lead-in information is valid;
 - reproducing the contents information from the data area in response to the read-out first lead-in information when it is decided that the read-out first lead-in information is valid;
 - deciding whether or not second lead-in information is required to be read out from the second lead-in information area;

and

- reading out the second lead-in information from the second lead-in information area, and reproducing the contents information from the data area in response to the read-out first lead-in information and the read-out second lead-in information in cases where it is decided that the second lead-in information is required to be read out from the second lead-in information area.
18. A method of reproducing contents information from an information recording medium, the information recording medium comprising a lead-in area and a data area for storing the contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the method comprising the steps of:
- 15 deciding whether first lead-in information is present in or absent from the first lead-in information area;
- reading out the first lead-in information from the first lead-in information area when it is decided that the first lead-in information is present in the first lead-in information area;
- 20 deciding whether the read-out first lead-in information is valid or invalid;
- reproducing the contents information from the data area in response to the read-out first lead-in information when it is decided that the read-out first lead-in information is valid; and
- 25 reading out second lead-in information from the second lead-in information area, and reproducing the contents information from

the data area in response to the read-out second lead-in information in cases where it is decided that the first lead-in information is absent from the first lead-in information area or in cases where it is decided that the read-out first lead-in information is invalid.

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19. An apparatus for reproducing contents information from an information recording medium, the information recording medium comprising a lead-in area and a data area for storing the contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the apparatus comprising:

first means for reading out first lead-in information from the first lead-in information area;

- 10 second means for deciding whether or not the read-out first lead-in information is valid;

third means for reproducing the contents information from the data area in response to the read-out first lead-in information when the second means decides that the read-out first lead-in information is valid;

- 15 20 fourth means for deciding whether or not second lead-in information is required to be read out from the second lead-in information area; and

25 fifth means for reading out the second lead-in information from the second lead-in information area, and reproducing the contents information from the data area in response to the read-out first lead-in information and the read-out second lead-in

information in cases where the fourth means decides that the second lead-in information is required to be read out from the second lead-in information area.

- 5 20. An apparatus for reproducing contents information from an information recording medium, the information recording medium comprising a lead-in area and a data area for storing the contents information, the lead-in area including a first lead-in information area and a second lead-in information area, the apparatus
10 comprising:

first means for deciding whether first lead-in information is present in or absent from the first lead-in information area;

- second means for reading out the first lead-in information from the first lead-in information area when the first means decides
15 that the first lead-in information is present in the first lead-in information area;

third means for deciding whether the read-out first lead-in information is valid or invalid;

- fourth means for reproducing the contents information from
20 the data area in response to the read-out first lead-in information when the third means decides that the read-out first lead-in information is valid; and

- fifth means for reading out second lead-in information from the second lead-in information area, and reproducing the contents
25 information from the data area in response to the read-out second lead-in information in cases where the first means decides that the

first lead-in information is absent from the first lead-in information area or in cases where the third means decides that the read-out first lead-in information is invalid.

- 5 21. A method as recited in claim 17, wherein the information recording medium comprises an information recording medium of claim 1.
- 10 22. An apparatus as recited in claim 19, wherein the information recording medium comprises an information recording medium of claim 1.
- 15 23. A rewritable information-recording optical disc comprising a lead-in area assigned to lead-in information and a data area assigned to contents information, the lead-in area including a first sub-area and a second sub-area, the first sub-area corresponding to first disc standards and including a phase change recording area, the first sub-area being assigned to lead-in information corresponding to the first disc standards, the second sub-area corresponding to second disc standards different from the first disc standards and including pre-pits representative of predetermined information in a predetermined logic state, the predetermined information relating to the contents information to which the data area is assigned, the second sub-area being assigned to lead-in information corresponding to the second disc standards, the data area including a phase change recording area.
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24. An information recording medium as recited in claim 1,
wherein the predetermined information comprises information of
copyright protection related to the contents information stored in
5 the data area.
25. An information recording medium as recited in claim 2,
wherein the predetermined information comprises information of
copyright protection related to the contents information stored in
10 the data area.
26. A method as recited in claim 5, wherein the predetermined
information comprises information of copyright protection related
to the contents information stored in the data area.
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27. An apparatus as recited in claim 6, wherein the
predetermined information comprises information of copyright
protection related to the contents information stored in the data
area.
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28. An information recording medium as recited in claim 11,
wherein the predetermined information comprises information of
copyright protection related to the contents information stored in
the data area.
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29. An information recording medium as recited in claim 12,

wherein the predetermined information comprises information of copyright protection related to the contents information stored in the data area.

- 5 30. A rewritable information-recording optical disc comprising a lead-in area assigned to lead-in information and a data area assigned to contents information, the lead-in area including a first sub-area and a second sub-area, the first sub-area corresponding to first disc standards and including a phase change recording area, the first
- 10 sub-area being assigned to lead-in information corresponding to the first disc standards, the second sub-area corresponding to second disc standards different from the first disc standards and including pre-pits representative of copyright protecting information in a predetermined logic state, the second sub-area being assigned to
- 15 lead-in information corresponding to the second disc standards, the data area including a phase change recording area.